REMARKS:

Claims 1-20 are in the case and are presented for reconsideration.

Claim 1 has been amended to better define the invention in a manner that is believed to be unobvious to those having ordinary skill in the art to which this invention pertains, for the reasons that follow.

Claims 1-20 have been rejected as being obvious from US Patent 6,340,416 to Goedicke at al. (hereafter Goedicke) taken in view of US Patent 5,993,613 to Manley.

After reading and fully considering what Goedicke and Manley actually teach without hindsight gleaned from the present application, the skill artisan is left far from to claimed invention.

Looking first at the disclosed arrangement of Manley, a common converter arrangement is shown with a bridge circuit including a step-up or step-down transformer with a rectifier arrangement at its output to create the DC output. This is exactly the state of the art from which the present invention starts to solve the problems of such an arrangement. This is clearly described in the application. With reference to the published version of the present application at US2005/0098430, see paragraph [0005] and Fig. 1. Converter 7 in Fig. 1 (and in the other circuit diagrams as well) is such a common step-up or step-down transformer in the same way as Manley discloses. For the skilled artisan in this field, this is very clear. As supported at paragraph [0004] of the present application, converter 7 is now claimed to include a "converter transformer" to better distinguish this transformer from the second, potential-isolating transformer 14 of the circuit.

In the claimed invention an additional bridge circuit (13) with an additional transformer (14) are provided beside the voltage setting converter 7 that is also used in Manley, to decouple the load output electrodes 2, 3 (plasma discharge path) from the well

known converter arrangement. In the prior art nowhere is such a "double" arrangement shown. The skilled artisan would also be lead away from using such a double arrangement which is much more costly, unless there is some reason to do so, e.g. by first reading the present application. Neither Goedicke nor Manley teach any reason to add a second transformer nor any benefits that would result from such added expense.

The task of the second transformer 14 of the present invention is not primarily transforming a voltage, but rather to generate a potential insulation and simultaneously to avoid reactive effects on the sensitive switch semiconductors in the bridge, thus also decoupling the plasma with respect to the bridge circuit (see paragraph [0009] of US2005/0098430). That is the reason why the transformation ratio of this transformer is low, close to 1 (e.g. 1:2 max in claim 1 and 1:1.5 max in claim 2). This is contrary to the converter transformer which must transform the voltage as in Manley and for the claimed converter 7 where for Magnetron sputtering is typical up to 1000V (see Table 3 in paragraph [0043]). In the second bridge and transformer arrangement (13, 14) of the present invention the desired pulse will be generated separately (independently) from the converter which produces the needed voltage. This is in contrast to Manlay where the high voltage and pulse are both produced in the same single bridge-transformer arrangement.

Beside this, it is very important that with the invention the pulse shape will not be deformed by additional electronic elements in the output circuit and that the plasma discharge path is connected "directly" with the secondary of the "second" transformer 14. The secondary therefore forms a short circuit together with the electrodes 2, 3. This forms a free running circuit which reduce the current and arcing is largely avoided.

The Examiner's reasoning in finding the claimed invention to be an obvious combination of Goedicke and Manley is respectfully traversed in that only after reading the

present application does the skilled artisan have sufficient reason to pick and choose from among the circuit features of these two reference to reach the claimed circuit.

Although the Examiner had accepted the important direct connection defined in claim 1 as "the two connections of the secondary winding being respectively and directly connected to the two outputs (26, 26') which are respectively and directly connected," to the two electrodes (3), the requirement that there be no electronic components between the secondary winding and the electrodes was rejected previously as being new matter.

Although it is believed that the application as a whole supported this lack of any electronic components between the secondary winding of transformer 14 and electrodes 3, claim 1 has now been amended to required that the connections from the secondary winding (23), to the output (26,26'), to the electrodes (3,3):

> "consist only of respective lines from the secondary winding being respectively and directly connected by said respective lines only to the two outputs (26, 26') which are respectively and directly connected only by said lines to the two electrodes (3) to short circuit the electrodes via the secondary winding and for galvanic decoupling of the two outputs ".

This is believed to be clearly disclosed in the text and drawings of the application as filed and is at the heart of the invention and its distinction over the prior art. This claim language being "closed" claim language ("consisting only of"), also precludes any other electronic components between the secondary winding and the electrodes which is contrary to both cited references. The resulting short circuiting of the electrodes 3, 3 by the direct secondary transformer winding connection (also claimed) is also clearly disclosed, for example at paragraphs [0010] and [0030] of the application as filed. The galvanic decoupling of the two outputs (also claimed) is disclosed at paragraph [0008], the

original claim 1 and in the original Abstract of the application as filed.

The claimed arrangement is thus very specific in this regard and is quite different from anything fairly taught by any obvious combination of Goedicke and Manley.

Accordingly it is believed that the invention claimed is patentable over the prior art combination and all available prior art in this field, and that the application and claims are in condition for allowance.

Not new matter has been add by this amend and the Examiner is respectfully invited to telephone the undersigned in the interest of reaching a conclusion to the prosecution of this application.

Respectfully submitted,

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